

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-11 (Canceled).

Claim 12 (Currently Amended): A light scanning device comprising:

an optical element that images, on an image holding body, a light beam emitted from a light source;

a holding member that holds the optical element;

scanning line curve correcting means for correcting the optical element in a sub scanning direction to correct a scanning line in the sub scanning direction, the scanning line being formed by the light beam; and

scanning line inclination correcting means for entirely tilting the optical element around a supporting point positioned at a center of the optical element along the scanning line to correct an inclination of the scanning line, wherein the supporting point is positioned near an optical axis of the optical element and is in contact with a center of the holding member in a plane parallel to the scanning line and perpendicular to the optical axis of the optical element.

wherein at least one part of the scanning line curve correcting means, and at least one part of the scanning line inclination correcting means are provided integrally with the holding member,

wherein the holding member further includes a supporting member that is long in a main scanning direction, and that supports the optical element from the sub scanning direction, and

the holding member includes a reference surface that contacts with the optical element and provides a reference position for the optical element in the holding member,

wherein the scanning line curve correcting means includes pressing means for pressing the optical element from an opposite side of a surface of the optical element that contacts with the supporting member,

wherein the reference surface is formed at a position that does not correspond to a position where the pressing means presses the optical element.

Claim 13 (Canceled).

Claim 14 (Previously Presented): The light scanning device according to claim 12, wherein the reference surface is formed at a part that does not correspond to both end parts of the optical element.

Claims 15-16 (Canceled).

Claim 17 (Previously Presented): The light scanning device according to claim 12, wherein a plurality of the pressing means are provided in a longitudinal direction of the supporting member.

Claim 18 (Previously Presented): The light scanning device according to claim 12, wherein a single number of the pressing means is provided approximately at a center in a longitudinal direction of the supporting member.

Claim 19 (Previously Presented): The light scanning device according to claim 12, wherein the pressing means comprises:

a pressing member that engages the optical element from the opposite side of the surface of the optical element that contacts with the supporting member; and

a pressing operation member that pushes the pressing member against the optical element.

Claim 20 (Original): The light scanning device according to claim 19, wherein the pressing operation member includes a tapered pin, and when the tapered pin is moved in an axial direction of the tapered pin, the tapered pin pushes the pressing member against the optical element.

Claim 21 (Original): The light scanning device according to claim 20, wherein the pressing member has a cylinder shape of which axial direction is approximately parallel to an optical axis direction of the optical element, and an axial direction of the tapered pin is approximately orthogonal to the axial direction of the cylinder shape.

Claim 22 (Original): The light scanning device according to claim 21, wherein the optical element includes a depression part that is formed at a surface that belongs to the optical element, and that contacts with the pressing member,

and a length of the pressing member in the axial direction of the cylinder shape is longer than a width of the depression part in the optical axis direction of the optical element.

Claim 23 (Previously Presented): The light scanning device according to claim 12, wherein the pressing means includes a screw that is moved relative to the optical element in a direction including the sub scanning direction.

Claim 24 (Previously Presented): The light scanning device according to claim 12, wherein the holding member comprises a sandwiching support member that is positioned at an opposite side of the surface of the optical element contacting with the supporting member, and that sandwiches and supports the optical element in cooperation with the supporting member.

Claim 25 (Original): The light scanning device according to claim 24, wherein at least one part of the pressing means, and at least one part of the scanning line inclination correcting means are provided integrally with the sandwiching support member.

Claim 26 (Original): The light scanning device according to claim 12, wherein the scanning line inclination correcting means entirely tilts the holding member together with the optical element to correct the inclination of the scanning line.

Claims 27-28 (Canceled).

Claim 29 (Original): The light scanning device according to claim 12, wherein independently of each other, the scanning line curve correcting means and the scanning line inclination correcting means correct the scanning line.

Claim 30 (Original): The light scanning device according to claim 12, wherein the light scanning device is used for scanning a plurality of the image holding bodies by the light beams.

Claim 31 (Original): The light scanning device according to claim 30, wherein the plurality of image holding bodies are provided for forming toner images of colors that are different from each other.

Claim 32 (Original): The light scanning device according to claim 30, wherein the scanning line curve correcting means and the scanning line inclination correcting means correct at least one beam of the beams corresponding to the plurality of image holding bodies, respectively.

Claim 33 (Original): The light scanning device according to claim 32, wherein one of colors corresponding to the plurality of photoconductive bodies, respectively is set as a standard color,

and the scanning line curve correcting means and the scanning line inclination correcting means perform correcting to conform, to the scanning line of the standard color, the scanning lines corresponding to the colors other than the standard color.

Claim 34 (Original): The light scanning device according to claim 33, wherein the standard color is black or magenta.

Claim 35 (Original): The light scanning device according to claim 30, further comprising:

deflecting means for deflecting the light beam;

an optical path refracting member that is provided between the light source and the deflecting means; and

writing start position adjusting means for changing the position of the scanning line in the sub scanning direction by rotating the optical path refracting member approximately around an optical axis of the light beam to be refracted by the optical path refracting member.

Claim 36 (Original): The light scanning device according to claim 35, wherein the optical path refracting member includes a wedge-shaped prism.

Claim 37 (Original): The light scanning device according to claim 35, further comprising position displacement detection means for detecting a writing start position displacement in the sub scanning direction that is relative amount between the plurality of image holding bodies,

wherein feedback control of the writing start position adjusting means is performed based on the writing start position displacement detected by the position displacement detection means.

Claim 38 (Original): The light scanning device according to claim 35, wherein the position of the scanning line on the image holding body is controlled by using the writing start position adjusting means during writing of image data.

Claim 39 (Original): The light scanning device according to claim 12, further comprising a fixed member that supports the holding member such that the holding member is movable in a direction of correcting the inclination of the scanning line,

wherein the scanning line inclination correcting means comprises:

an elastic member that is provided integrally with the holding member and the fixed member, and that supports the holding member such that the holding member is movable

relative to the fixed member in the direction of correcting the inclination of the scanning line;  
and

holding member tilting means for tilting the holding member against force generated from the elastic member.

Claim 40 (Original): The light scanning device according to claim 39, wherein the holding member tilting means includes a screw.

Claim 41 (Original): The light scanning device according to claim 12, wherein the scanning line inclination correcting means comprises:

driving means, provided integrally with the holding member, for driving the holding member to be tilted;

inclination detection means for detecting the inclination of the scanning line; and  
control means for causing the driving means to entirely tilting the holding member, in accordance with the inclination of the scanning line detected by the inclination detection means, so that the inclination of the scanning line is corrected.

Claim 42 (Original): The light scanning device according to claim 41, further comprising a fixed member that supports the holding member such that the holding member is movable in a direction of correcting the inclination of the scanning line,

wherein the scanning line inclination correcting means comprises:

an elastic member that is provided integrally with the holding member and the fixed member, and that supports the holding member such that the holding member is movable relative to the fixed member in the direction of correcting the inclination of the scanning line;  
and

holding member tilting means that functions as the driving means, and that tilts the holding member against force generated from the elastic member.

Claim 43 (Previously Presented): The light scanning device according to claim 39, wherein the elastic member includes a leaf spring or a coil spring.

Claim 44 (Previously Presented): The light scanning device according to claim 42, wherein the elastic member includes a leaf spring or a coil spring.

Claim 45 (Currently Amended): A method of correcting a curve and inclination of a scanning line of light beam emitted from a light source, comprising the steps of:

holding an optical element with a holding member;

correcting the optical element in a sub scanning direction to correct the curve of the scanning line, the optical element imaging the light beam on an image holding body; and

entirely tilting the optical element around a supporting point positioned at a center of the optical element along the scanning line to correct the inclination of the scanning line,

wherein the supporting point is positioned near an optical axis of the optical element and is in contact with a center of the holding member in a plane parallel to the scanning line and perpendicular to the optical axis of the optical element, and

wherein the holding includes providing a reference surface that contacts with the optical element and provides a reference position for the optical element, and the correcting includes pressing the optical element from an opposite side of a surface of the optical element, and the reference surface is provided at a position that does not correspond to a position where the pressing presses the optical element.



Claim 46 (Original): The method according to claim 45, further comprising the steps of:

supporting the optical element from the sub scanning direction; and  
pressing the supported optical element in the sub scanning direction to correct the curve of the scanning line.

Claim 47 (Original): The method according to claim 45, further comprising the step of supporting the optical element by elastic force such that the optical element is movable in a direction of correcting the inclination of the scanning line,

wherein the step of entirely tilting comprises the step of tilting the supported optical element against the elastic force.

Claim 48 (Original): The method according to claim 45, further comprising the step of detecting an amount of the inclination of the scanning line,

wherein the step of entirely tilting comprises the step of tilting the optical element in accordance with the detected amount of the inclination of the scanning line.

Claim 49 (Currently Amended): An image forming apparatus comprising a light scanning device, wherein the light scanning device includes:

an optical element that images, on an image holding body, a light beam emitted from a light source;

a holding member that holds the optical element;

scanning line curve correcting means for correcting the optical element in a sub scanning direction to correct a scanning line formed by the light beam in the sub scanning direction; and

scanning line inclination correcting means for entirely tilting the optical element around a supporting point positioned at a center of the optical element along the scanning line to correct an inclination of the scanning line, wherein the supporting point is positioned near an optical axis of the optical element and is in contact with a center of the holding member in a plane parallel to the scanning line and perpendicular to the optical axis of the optical element.

wherein at least one part of the scanning line curve correcting means, and at least one part of the scanning line inclination correcting means are provided integrally with the holding member,

wherein the holding member includes a reference surface that contacts with the optical element and provides a reference position for the optical element in the holding member, the scanning line curve correcting means includes pressing means for pressing the optical element from an opposite side of a surface of the optical element that contacts with the supporting member, and the reference surface is formed at a position that does not correspond to a position where the pressing means presses the optical element.

Claim 50 (Previously Presented): A light scanning device comprising:

an optical element that images, on an image holding body, a light beam emitted from a light source;

a holding member that holds the optical element;

scanning line curve correcting means for correcting the optical element in a sub scanning direction to correct a scanning line in the sub scanning direction, the scanning line being formed by the light beam; and

scanning line inclination correcting means for entirely tilting the optical element to correct an inclination of the scanning line,

wherein at least one part of the scanning line curve correcting means, and at least one part of the scanning line inclination correcting means are provided integrally with the holding member,

wherein the holding member further includes a supporting member that is long in a main scanning direction, and that supports the optical element from the sub scanning direction, and

the holding member includes a reference surface that contacts with the optical element and provides a reference position for the optical element in the holding member,

wherein the scanning line curve correcting means includes pressing means for pressing the optical element from an opposite side of a surface of the optical element that contacts with the supporting member, and

the pressing means includes a pressing member that engages the optical element from the opposite side of the surface of the optical element that contacts with the supporting member and a pressing operation member that pushes the pressing member against the optical element,

wherein the reference surface is formed at a position that does not correspond to a position where the pressing means presses the optical element.

Claim 51 (Previously Presented): The light scanning device according to claim 50, wherein the pressing operation member includes a tapered pin, and when the tapered pin is moved in an axial direction of the tapered pin, the tapered pin pushes the pressing member against the optical element.

Claim 52 (Previously Presented): The light scanning device according to claim 51, wherein the pressing member has a cylinder shape of which axial direction is approximately

parallel to an optical axis direction of the optical element, and an axial direction of the tapered pin is approximately orthogonal to the axial direction of the cylinder shape.

Claim 53 (Previously Presented): The light scanning device according to claim 52, wherein the optical element includes a depression part that is formed at a surface that belongs to the optical element, and that contacts with the pressing member,

and a length of the pressing member in the axial direction of the cylinder shape is longer than a width of the depression part in the optical axis direction of the optical element.

Claim 54 (Previously Presented): A light scanning device comprising:

an optical element that images, on an image holding body, a light beam emitted from a light source;

a holding member that holds the optical element;

scanning line curve correcting means for correcting the optical element in a sub scanning direction to correct a scanning line in the sub scanning direction, the scanning line being formed by the light beam; and

scanning line inclination correcting means for entirely tilting the optical element to correct an inclination of the scanning line,

wherein at least one part of the scanning line curve correcting means, and at least one part of the scanning line inclination correcting means are provided integrally with the holding member,

wherein the holding member further includes a supporting member that is long in a main scanning direction, and that supports the optical element from the sub scanning direction, and

the holding member includes a reference surface that contacts with the optical element and provides a reference position for the optical element in the holding member,

wherein the holding member comprises a sandwiching support member that is positioned at an opposite side of the surface of the optical element contacting with the supporting member, and that sandwiches and supports the optical element in cooperation with the supporting member,

wherein the scanning line curve correcting means includes pressing means for pressing the optical element from an opposite side of a surface of the optical element that contacts with the supporting member,

wherein the reference surface is formed at a position that does not correspond to a position where the pressing means presses the optical element.

Claim 55 (Previously Presented): The light scanning device according to claim 54, wherein at least one part of the pressing means, and at least one part of the scanning line inclination correcting means are provided integrally with the sandwiching support member.

Claim 56 (Currently Amended): A light scanning device comprising:  
an optical element that images, on an image holding body, a light beam emitted from a light source;  
a holding member that holds the optical element;  
scanning line curve correcting means for correcting the optical element in a sub scanning direction to correct a scanning line in the sub scanning direction, the scanning line being formed by the light beam; and  
scanning line inclination correcting means for entirely tilting the optical element to correct an inclination of the scanning line,

wherein the scanning line inclination correcting means includes a supporting point member that provides a supporting point when the scanning line inclination correcting means tilts the holding member,

wherein the supporting point is positioned near an optical axis of the optical element and is in contact with a center of the holding member in a plane parallel to the scanning line and perpendicular to the optical axis of the optical element,

wherein the supporting point is positioned near the optical axis of the optical element,

wherein at least one part of the scanning line curve correcting means, and at least one part of the scanning line inclination correcting means are provided integrally with the holding member,

wherein the holding member further includes a supporting member that is long in a main scanning direction, and that supports the optical element from the sub scanning direction, and

the holding member includes a reference surface that contacts with the optical element and provides a reference position for the optical element in the holding member,

wherein the scanning line curve correcting means includes pressing means for pressing the optical element from an opposite side of a surface of the optical element that contacts with the supporting member,

wherein the reference surface is formed at a position that does not correspond to a position where the pressing means presses the optical element.